United States Environmental Protection Agency

Region 10 Emergency Response Unit

POLLUTION REPORT

I. HEADING

Date: October 15, 2001
Subject: Coeur d'Alene River Basin Removal Actions, 2001 Construction Season
From: Bill Longston, OSC, USEPA, Region 10, Emergency Response Unit
Carl Kitz, OSC, USEPA, Region 10, Emergency Response Unit
Tel: Bill Longston Office (206) 553-1679
Carl Kitz Office (206) 553-1671
TO: See Distribution List on last page

POLREP No.2

II. BACKGROUND

Site ID: IDD048340921
Interagency Agreement No: DW96957237-01-7
Contract/Task Order No: DACW41-99-D-9004/EC01
Response Authority: CERCLA
NPL Status: Final-Listed on September 8, 1983
State Notification: Idaho Department of Environmental Quality
Action Memo Status: Initial Action Memo signed October 6, 1997
Special Circumstances Action Memo signed June 26, 2000
Removal Start Date: August 2001
Expected Completion Date: November 2001
Site Web Page: http://yosemite.epa.gov/r10/cleanup.nsf/sites/cda

III. SITE INFORMATION

A. Incident Category

Time Critical Removal Action (TCRA). For Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) actions where, based on evaluation of site-specific data, the U.S. EPA determines that a removal is appropriate, and that less than six months exists before an on-site removal must begin, a TCRA is initiated.

B. Site Description/Location

The Bunker Hill Mining and Metallurgical Site is located in the panhandle of northern Idaho, in the drainage of the Coeur d'Alene River. The site extends from upstream mining and metallurgical activities downstream to Lake Coeur d'Alene. Cleanup activities at the Bunker Hill Mining and Metallurgical Site to date have focused on 21 square miles encompassing the communities of Pinehurst, Page, Smelterville, Kellogg, and Wardner, Idaho. The site also includes the former locations of the Bunker Hill mine, a concentrator, a lead smelter, an electrolytic zinc plant, a phosphoric acid and fertilizer plant, a cadmium plant, a number of mills, and sulfuric acid plants.

Mining operations began in the area in 1889, with lead smelting starting in 1917. During the majority of the milling and smelting operations, few environmental protection procedures or controls were implemented. Prior to 1938, all liquid and solid residues of mine tailings from the Bunker Hill industrial complex were discharged directly into the Coeur d'Alene River and its tributaries. Thereafter, waste streams were directed to a large outwash plain located west of Kellogg and just north of the Bunker Hill industrial complex. Lead smelter slag was deposited in a pile on the western end of this plain. On the eastern end of the plain, a central impoundment area was developed and was surrounded by a 70-foot high dike of mine tailings and waste rock. All liquid wastes, including mine pump effluent, were directed to the pond for settling and then discharged to the river.

In 1973, a fire occurred in the Bunker Hill smelter baghouse. Without the functioning baghouse, over 1,000 tons of particulate lead were released into the air in this one-year period. Smokestack and other emissions from the smelting operations and acidic water discharged from mines in the area have contaminated the hillsides and other areas surrounding the site, destroying large areas of vegetation.

Historic discharges of wastes from upstream mining and milling operations broadly dispersed lead, zinc, and other hazardous substances downstream through the Coeur d'Alene River Basin, including areas in the towns of Pinehurst, Kellogg, and Smelterville.

The residential and common use areas addressed under this TCRA are located outside the 21 square mile portion of the Bunker Hill site that has been the focus of much of the site clean-up actions to date. These residential and common use areas are located in incorporated and unincorporated areas of Kootenai and Shoshone Counties, Idaho, within the floodplain of the Coeur d'Alene River. The incorporated communities include Osburn, and Wallace. The populations of these commercial and residential communities range from between 200 and 1,500 people. The unincorporated areas are generally agricultural, forest, or pasture lands with relatively low population density.

C. Assessment Results

The Corps of Engineers completed sampling of yards in 2001, the results of which demonstrate at least 13 residential properties are contaminated above soil Early Action Levels (EAL) for, predominately, lead. The EAL for lead in residential soil is 1,000 parts per million (ppm) and in common use areas is 2,000 ppm (see Action Memo, Table 1). Those residential areas exhibiting site-related metals concentrations in excess of the residential EALs have been determined to pose an unacceptable exposure risk and therefore require a TCRA. Similarly, those common use areas exhibiting site-related metals concentration in excess of the common use EALs have also been determined to require a TCRA. Site-related contaminants of concern include antimony, arsenic, cadmium, copper, lead, manganese, mercury, zinc and possibly other metals which are likely present because of historic ore mining, milling, an waste disposal practices and local construction practices.

Clean-up efforts under this TCRA emphasize residential and common use properties with lead-contaminated soil because these areas likely present the greatest risk to children and/or pregnant women.

IV. Response Information

A. Description of Response Activities

Response activities at residential and common use properties addressed under this TCRA have been designed to provide a protective barrier to prevent human exposure to the underlying contaminated soil and include the following:

- Excavation of material contaminated with site-related metals above the EAL to a depth of 12" except:
  - 18" in designated vegetable growing areas, and
  - to a minimally greater depth if such additional excavation allows all material contaminated above Bunker-Hill action levels to be removed from the property,
- Placement of a visual barrier, such as a geotextile, between contaminated material remaining on-site and clean backfill, and
- Backfilling of excavated areas with clean gravel or soil/sod.

B. Situation

1. Current Situation

October 8, 2001 (Monday)

Holiday

October 9, 2001 (Tuesday)

Personnel On-Site: CCI (5), Stewart (9), = Total of 14.

Weather: Partly cloudy

Description of On-Site Activities:

- Highway 3: Held Tailgate safety meeting. Finished quarry spalls at base of geogrid. Continued shipping soils to repository. Continued filling sand bags. Started delivery of 3' minus material. Started leveling rock base with 3" minus material. No detected impacts to river turbidity.

- M&H Trailer Park: Work Substantially complete

- Residences. Initiated work in yard R308. Completed nearly 70% of work. Removed soil and sod (12 truckloads). Replaced gravel driveway (6 truckloads). Removed concrete pads, cut off pipes in retaining wall and grouted over. Repaired cracks in retaining wall.

October 10, 2001 (Wednesday)

Personnel On-Site: CCI (5), Stewart (9), = Total of 14.

Weather: Cloudy, Partly Cloudy with Rain, 30-50 deg

Description of On-Site Activities:

- Highway 3: 33% complete with upland grading and capping, 40 percent complete with geogrid. Continued filling sand bags. Finished rock base for geogrid. Started first geogrid cell. Continued receipt of materials. Continued sending excavated material to repository. Held tailgate safety meeting. Turbidity testing indicates no increase in turbidity.

- Residences– R308 Approximately 80% complete. Continued with backfill of soil and gravel. Backfilled drainage rock. Initiated work at R316. Approximately 35% complete. Removed tree, initiated soil and sod removal. Held tailgate safety meeting. Conducted personnel air monitoring.

October 11, 2001 (Thursday)

Personnel On-Site: CCI (5), Stewart (9), = Total of 14.

Weather: cloudy, 35 deg

Description of On-Site Activities:

- Highway 3: Upland capping 33% complete, Geogrids (slope stability work) 42% complete. Continued filling sand bags. Started cutting willows, finished filling first cell. Wrapped fabric around cell toe. Held tailgate safety meeting. Turbidity testing indicates no increase in turbidity.

- Residences. R308 approximately 80% complete. Waiting for sod delivery R316 – approximatley 65% complete. Continued removal excavation. Completed front to driveway and 50% of east side excavation. Held tailgate safety meeting. Collected soil samples at depth on front and east side of house.

<u>October 12, 2001 (Friday)</u>

Personnel On-Site: CCI (5), Stewart (11), = Total of 16.

Weather: AM rain/wind, PM cloudy some rain, 32-45 deg.

Description of On-Site Activities:

- Highway 3: Upland capping 33% complete, geogrid (slope stability work) 47% complete. Continued bank excavation. Checked toe and head measurements of upper cell. Set up shelter to fill sand bags. Continued filling sandbags, cutting willows, hauling spoils to repository. Continued delivery of materials on site. Finished first cell. Placed lower fabric, sand bags, willows with soil and first lift of structural fill for second cell. Held tailgate safety meeting. Secured site for weekend. No work was done adjacent to the river, therefore no turbidity measurements were needed. Checked dimensions for second cell. Inspected fabric laps.

- Residences. R308 80% complete. R316 75%complete. Continued excavation at R316. Excavated and disposed of 25 truck loads of material. Imported gravel and soil to R316. Sampled soils. Held tailgate safety meeting. Secured site for weekend.

<u>October 13, 2001 (Saturday)</u>

No work performed

<u>October 14, 2001 (Sunday)</u>

No work performed

2. Soil Volumes Removed to Date

Summary of Daily Excavation Volumes – Highway 3

Date	Volumes	Disposal Location
Total through 10/7/2001	250 CY	NA
10/8/2001	0	NA
10/9/2001	200CY	Borrow Area Landfill
10/10/2001	160 CY	Borrow Area Landfill
10/11/2001	210 CY	Borrow Area Landfill
10/12/2001	180 CY	Borrow Area Landfill
10/13/2001	0	NA
10/14/2001	0	NA
Weekly Total	750	Borrow Area Landfill
TOTAL	**1,000**	Borrow Area Landfill

Summary of Daily Excavation Volumes – Four Osburn Residences, R302, R308, R316,

Date	Volumes	Disposal Location
Total through 10/7/2001	0	N/A
10/8/2001	0	N/A
10/9/2001	120 CY	Borrow Area Landfill
10/10/2001	40 CY	Borrow Area Landfill
10/11/2001	80 CY	Borrow Area Landfill
10/12/2001	250 CY	Borrow Area Landfill
10/13/2001	0	N/A
10/14/2001	0	N/A
Weekly Total	490 CY	Borrow Area Landfill
TOTAL	490 CY	Borrow Area Landfill

Summary of Total Daily Excavation Volumes All Properties	
Date	**Volumes**
Total through 10/7/2001	2,020 CY
10/8/2001	0
10/9/2001	320 CY
10/10/2001	200 CY
10/11/2001	290 CY
10/12/2001	430 CY
10/13/2001	0
10/14/2001	0
Weekly Total	1,240 CY
GRAND TOTAL	3,260 CY

3. Properties Completed to Date

Summary of TCRA Properties				
Property	**Start Date**	**Complete Date**	**Area Excavated**	**Volume Excavated**
Highway 3	9/21/01		54,545 Sq. Ft.	1,000 CY
Osburn Middle School	08/13/01	09/03/01	60,000 Sq. Ft.	1,100 CY
M&H Trailer	09/05/01	10/09/01	36,546 Sq. Ft.	670 CY
R-302				
R-308	10/09/01		6,545 Sq. Ft.	120 CY
R-316	10/10/01		20,182 Sq. Ft.	370 CY
R-319				
R-328				
R-311				
R-317				
R-321				
R-323				
R-305				
R-301				
R-320				
Elk Creek				

C. Planned Removal Activities

Highway 3: Excavation of quarry spall toe for the geogrids to be competed week of October 8. Construction of the vegetated geogrids will begin week of October 8. On-site construction expected to be complete week of October 26.

Elk Creek: Design drawings submitted to USACE for review. USACE is waiting return call from property owner to assure he is comfortable with the limited amount of work planned at the site this construction season. USACE/EPA will contact Voice of America to determine their intentions.

Six Residences (R-302, R-308, R-316, R-319, R-301, R-320): Removal activities begn the week of October 9 and are expected to finish the week of October 22.

Six Additional Residences (R-328, R-311, R-317, R-321, R-323, R-305): Home owners have been informed their yards are contaminated above EALs. USACE has not received approval from homeowners, but expects approval this week.

D. Next Steps

USACE to continue to perform oversight of the removal actions until completion, including liaison activities to ensure that appropriate coordination with property owners continues. USACE to assure efficient winter shut-down in conjunction with completion of as many yard removals as possible.

V. Cost Information

Estimated CCI costs (as of 10/5/01) are summarized below:

Estimated CCI Total	$ 2,142,768.80
Established Contract	$ 1,064,633.36
Remaining Capacity	$(1,078,135.44)

Note: The above accounting of expenditures is an estimate based on figures known to USACE at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

VI Disposition of Wastes

All grubbed material and mine waste-contaminated material requiring removal from the sites have been disposed on-site in the Borrow Area Landfill. A volume inventory of waste material accepted is maintained at the Borrow Area Landfill by the landfill

operator Bay West, under USACE oversight. No hazardous wastes have been, or are expected to be, identified during the execution of this TCRA.

VII Distribution

To:

Sheila Eckman, Coeur d'Alene Team Leader, EPA Region 10
Ann Williamson, Unit Chief, EPA Region 10 Site Cleanup Unit 4
Nick Ceto, Regional Mining Coordinator, EPA Region 10
Chris Field, OSC, EPA Region 10 Emergency Response Unit
Terry Eby, EPA Headquarters
Ginny Dierich, Project Manager, USACE Seattle District Environmental Management Branch
Rich Fink, Project Engineer, USACE, Seattle District, Coeur d'Alene Field Office
Nick Zilka, Project Manager, Idaho Department of Environmental Quality
John Lawson, Project Manager, Idaho Department of Environmental Quality

VII Status

Site actions are pending.

IX Photos

Photos of progress on the Highway 3 geogrids follow.

Highway 3 Streambank Stabilization, Layer 4: placement of vegetative whips over geo-grid reinforcements.

Highway 3 Streambank Stabilization, Layer 4:vegetative whips, geogrid reinforcement. Note sedimentation fence at base of wall and river.

Highway 3 Streambank Stabilization, layer 4: View downstream